



Environment Protection Licence

Licence - 761

Licence Details	
Number:	761
Anniversary Date:	01-July

Licensee
SUNSET POWER INTERNATIONAL PTY LTD
PO BOX 7285
MANNERING PARK NSW 2259

Premises
VALES POINT POWER STATION AND COAL UNLOADER
VALES POINT ROAD
MANNERING PARK NSW 2259

Scheduled Activity
Chemical storage
Coal works
Crushing, grinding or separating
Electricity generation
Energy recovery

Fee Based Activity	Scale
Coal works	> 2000000-5000000 T annual handing capacity
Crushing, grinding or separating	> 2000000 T annual processing capacity
Energy recovery from general waste	Any capacity
General chemicals storage	0-5000 kL storage capacity
Generation of electrical power from coal	> 4000 GWh annual generating capacity
Petroleum products storage	0-5000 kL storage capacity



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Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act);
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).



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The EPA publication “A Guide to Licensing” contains information about how to calculate your licence fees. The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

SUNSET POWER INTERNATIONAL PTY LTD
PO BOX 7285
MANNERING PARK NSW 2259

subject to the conditions which follow.



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1 Administrative Conditions

A1 What the licence authorises and regulates

A1.1 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Coal works	Coal works	> 2000000 - 5000000 T annual handing capacity
Crushing, grinding or separating	Crushing, grinding or separating	> 2000000 T annual processing capacity
Energy recovery	Energy recovery from general waste	Any capacity
Chemical storage	General chemicals storage	0 - 5000 kL storage capacity
Electricity generation	Generation of electrical power from coal	> 4000 GWh annual generating capacity
Chemical storage	Petroleum products storage	0 - 5000 kL storage capacity

A2 Premises or plant to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
VALES POINT POWER STATION AND COAL UNLOADER
VALES POINT ROAD
MANNERING PARK
NSW 2259
PREMISES DEFINED BY DOCUMENT(S) TITLED "VALES POINT POWER STATION - ENVIRONMENT - LICENCE MONITORING LOCATIONS - LAYOUT & DETAILS" REFERENCES "VX837351_1_05" AND "VX837351_2_00", DATED 03/06/2021 AND PROVIDED TO THE EPA ON 03/06/2021 (EPA REFERENCE DOC21/456186).

A2.2 The document(s) referred to in condition A2.1 above are herein referred to in this licence as "The Plans".

A3 Other activities

A3.1 This licence applies to all other activities carried on at the premises, including:



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Ancillary Activity
Electricity generation (generation of electrical power from diesel)
Railway activities - railway infrastructure operations
Sewage treatment

- A3.2 For the purpose of condition A3.1 above:
- a) electricity generation (generation of electrical power from diesel) means the operation of the emergency diesel generator(s) in accordance with the conditions of the licence; and
 - b) all other activities listed in condition A3.1 are as defined by Schedule 1 of the Protection of the Environment Operations Act 1997 although not meeting the scheduled activity threshold.

A4 Information supplied to the EPA

- A4.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

- a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
- b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

- A4.2 Any other document and/or management plan is not to be taken as part of the documentation in condition A4.1 above, other than those documents and/or management plans specifically referenced in this licence.

2 Discharges to Air and Water and Applications to Land

P1 Location of monitoring/discharge points and areas

- P1.1 The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point.

Air			
EPA identi- fication no.	Type of Monitoring Point	Type of Discharge Point	Location Description
1		Discharge to air	Discharge of air emissions from stack serving boilers number 5 and 6 marked and shown as EPA ID 1 on The Plans
2	Air emission monitoring		Combined air emissions from boiler 5 via Points 4 to 7 to Point 1 marked and shown as EPA ID 2 on The Plans
3	Air emission monitoring		Combined air emissions from boiler 6 via Points 8 to 11 to Point 1 marked and shown as EPA ID 3 on The Plans

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4	Air emission monitoring	Boiler number 5 exhaust - duct A marked and shown as EPA ID 4 on The Plans
5	Air emission monitoring	Boiler number 5 exhaust - duct B marked and shown as EPA ID 5 on The Plans
6	Air emission monitoring	Boiler number 5 exhaust - duct C marked and shown as EPA ID 6 on The Plans
7	Air emission monitoring	Boiler number 5 exhaust - duct D marked and shown as EPA ID 7 on The Plans
8	Air emission monitoring	Boiler number 6 exhaust - duct A marked and shown as EPA ID 8 on The Plans
9	Air emission monitoring	Boiler number 6 exhaust - duct B marked and shown as EPA ID 9 on The Plans
10	Air emission monitoring	Boiler number 6 exhaust - duct C marked and shown as EPA ID 10 on The Plans
11	Air emission monitoring	Boiler number 6 exhaust - duct D marked and shown as EPA ID 11 on The Plans
12	Air emission monitoring	Boiler number 5 combined exhaust - duct A and B (points 4 and 5) marked and shown as EPA ID 12 on The Plans
13	Air emission monitoring	Boiler number 5 combined exhaust - duct C and D (points 6 and 7) marked and shown as EPA ID 13 on The Plans
14	Air emission monitoring	Boiler number 6 combined exhaust - duct A and B (points 8 and 9) marked and shown as EPA ID 14 on The Plans
15	Air emission monitoring	Boiler number 6 combined exhaust - duct C and D (points 10 and 11) marked and shown as EPA ID 15 on The Plans
16	Meteorological weather monitoring Ambient air quality monitoring	Meteorological weather and ambient air monitoring station at Wyee marked and shown as EPA ID 16 on The Plans
17	Ambient air quality monitoring	Dust deposition gauge marked and shown as EPA ID 17 on The Plans
18	Ambient air quality monitoring	Dust deposition gauge marked and shown as EPA ID 18 on The Plans
19	Ambient air quality monitoring	Dust deposition gauge marked and shown as EPA ID 19 on The Plans
20	Ambient air quality monitoring	Dust deposition gauge marked and shown as EPA ID 20 on The Plans
21	Ambient air quality monitoring	Dust deposition gauge marked and shown as EPA ID 21 on The Plans
35	Meteorological weather monitoring Ambient air quality monitoring	Meteorological weather and ambient air monitoring station at Mannering Park

P1.2 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

P1.3 The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

Water and land

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EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
22	Discharge to waters Discharge quality monitoring Volume monitoring	Discharge to waters Discharge quality monitoring Volume monitoring	Discharge of cooling water from the cooling water outlet canal to Wyee Bay marked and shown as EPA ID 22 on The Plans
23	Discharge to waters Discharge quality monitoring Volume monitoring	Discharge to waters Discharge quality monitoring Volume monitoring	Discharge of supernatant water from the ash dam to the cooling water outlet canal to Wyee Bay marked and shown as EPA ID 23 on The Plans
24	Discharge to waters Discharge quality monitoring Volume monitoring	Discharge to waters Discharge quality monitoring Volume monitoring	Discharge of seepage water from the ash dam rehabilitation area to Mannering Bay marked and shown as EPA ID 24 on The Plans
25	Discharge to waters Discharge quality monitoring Volume monitoring	Discharge to waters Discharge quality monitoring Volume monitoring	Discharge of over boarded water from the ash dam to Mannering Bay marked and shown as EPA ID 25 on The Plans
26	Discharge to utilisation area Volume monitoring	Discharge to utilisation area Volume monitoring	Discharge of effluent from the onsite sewage treatment plant to the ash dam effluent application area marked and shown as EPA ID 26 on The Plans
27	Background water quality monitoring		Water quality monitoring in Crangan Bay marked and shown as EPA ID 27 on The Plans
28	Ambient water quality monitoring		Water quality monitoring in Wyee Bay marked and shown as EPA ID 28 on The Plans
29	Ambient water quality monitoring		Water quality monitoring in Chain Valley Bay marked and shown as EPA ID 29 on The Plans
30	Groundwater quality monitoring		Groundwater quality monitoring bore marked and shown as EPA ID 30 on The Plans
31	Groundwater quality monitoring		Groundwater quality monitoring bore marked and shown as EPA ID 31 on The Plans
32	Groundwater quality monitoring		Groundwater quality monitoring bore marked and shown as EPA ID 32 on The Plans
33	Groundwater quality monitoring		Groundwater quality monitoring bore marked and shown as EPA ID 33 on The Plans
34	Groundwater quality monitoring		Groundwater quality monitoring bore marked and shown as EPA ID 34 on The Plans

3 Limit Conditions

L1 Pollution of waters



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L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

L2 Load limits

L2.1 The actual load of an assessable pollutant discharged from the premises during the reporting period must not exceed the load limit specified for the assessable pollutant in the table below.

Note: An assessable pollutant is a pollutant which affects the licence fee payable for the licence.

L2.2 The actual load of an assessable pollutant must be calculated in accordance with the relevant load calculation protocol.

Assessable Pollutant	Load limit (kg)
Arsenic (Air)	
Benzene (Air)	
Benzo(a)pyrene (equivalent) (Air)	
Coarse Particulates (Air)	
Fine Particulates (Air)	
Fluoride (Air)	
Lead (Air)	
Mercury (Air)	
Nitrogen Oxides (Air)	
Salt (Enclosed Water)	
Selenium (Enclosed Water)	
Sulfur Oxides (Air)	
Total suspended solids (Enclosed Water)	
Volatile organic compounds (Air)	

L3 Concentration limits

L3.1 For each monitoring/discharge point or utilisation area specified in the table/s below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.

L3.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.

L3.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table/s.

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L3.4 Air Concentration Limits

POINT 2,3

Pollutant	Units of measure	100 percentile concentration limit	Reference conditions	Oxygen correction	Averaging period
Cadmium	milligrams per cubic metre	0.2	Dry, 273K, 101.3kPa	7% O ₂	1 hour
Chlorine	milligrams per cubic metre	20	Dry, 273K, 101.3kPa	7% O ₂	1 hour
Fluorine	milligrams per cubic metre	30	Dry, 273K, 101.3kPa	7% O ₂	1 hour
Hydrogen chloride	milligrams per cubic metre	50	Dry, 273K, 101.3kPa	7% O ₂	1 hour
Mercury	milligrams per cubic metre	0.05	Dry, 273K, 101.3kPa	7% O ₂	1 hour
Solid Particles	milligrams per cubic metre	50	Dry, 273K, 101.3kPa	7% O ₂	1 hour
Sulfuric acid mist and sulfur trioxide (as SO ₃)	milligrams per cubic metre	100	Dry, 273K, 101.3kPa	7% O ₂	1 hour
Sulfur dioxide	milligrams per cubic metre	1700	Dry, 273K, 101.3kPa	7% O ₂	1 hour
Type 1 and Type 2 substances in aggregate	milligrams per cubic metre	0.75	Dry, 272K, 101.3kPa	7% O ₂	1 hour
volatile organic compounds as n-propane equivalent	milligrams per cubic metre	10	Dry, 273K, 101.3kPa	7% O ₂	1 hour

L3.5 In addition to the concentration limits specified in condition L3.4 above, the following 99th percentile concentration limits apply for points 2 and 3 utilising the same units of measure, reference conditions, oxygen correction and averaging period as above for each pollutant listed below:

a) sulfur dioxide: 1400 mg/m³.

L3.6 For the purposes of conditions L3.4 and L3.5 of this licence:

a) Fluorine means: fluorine and any compound containing fluorine, as total fluoride (HF equivalent).

L3.7 Water and/or Land Concentration Limits



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POINT 22

Pollutant	Units of Measure	50%Limit	90%Limit	98.5%Limit	100 percentile concentration limit
Chlorine (free residual)	milligrams per litre				0.2
Copper	milligrams per litre				0.005
Iron	milligrams per litre				0.3
Selenium	milligrams per litre				0.005
Temperature	degrees Celsius			35	37.5

POINT 23,24

Pollutant	Units of Measure	50%Limit	90%Limit	98.5%Limit	100 percentile concentration limit
pH	pH				6.5-9.5
Total suspended solids	milligrams per litre				50

POINT 25

Pollutant	Units of Measure	50%Limit	90%Limit	98.5%Limit	100 percentile concentration limit
pH	pH				6.5-9
Total suspended solids	milligrams per litre				50

- L3.8 In addition to the concentration limits specified in condition L3.8 above, the following applies to point 22:
- a) the 98.5% limit specified for the pollutant ‘Temperature’ at point 22 means that during normal electricity supply conditions, cooling waters may be discharged over 35°C and up to, but not exceeding, a maximum temperature of 37.5°C for up to a total of 131 hours during the reporting period;
 - b) an additional 69 hours are available to allow compliance during periods of high electricity demand to avoid potential shortfall of electricity supply as per conditions E1.1 to E1.4 of this licence where cooling waters may be discharged over 35°C and up to, but not exceeding, a maximum temperature of 37.5°C over a reporting period;
 - c) the 100% limit specified for the pollutant ‘Temperature’ at point 22 means cooling waters discharged may never exceed the maximum temperature of 37.5°C except in accordance with conditions E1.1 to E1.4 of this



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licence; and
d) in the event that the licensee exceeds the 98.5 percentile temperature limit, the licensee must advise the EPA on a weekly basis, every day such an exceedance occurs.

L3.9 For the purpose of compliance with the temperature limits at conditions L3.8 and L3.9 of this licence, the limits are based on a 10-minute averaging period.

L4 Volume and mass limits

L4.1 For each discharge point or utilisation area specified below (by a point number), the volume/mass of:
a) liquids discharged to water; or;
b) solids or liquids applied to the area;
must not exceed the volume/mass limit specified for that discharge point or area.

Point	Unit of Measure	Volume/Mass Limit
22	megalitres per day	6500
23	megalitres per day	120
26	kilolitres per day	380

L5 Waste

L5.1 The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled “Waste” and meeting the definition, if any, in the column titled “Description” in the table below.
Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled “Activity” in the table below.
Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled “Other Limits” in the table below.
This condition does not limit any other conditions in this licence.

Code	Waste	Description	Activity	Other Limits
NA	Sandstone	Sandstone as defined by and meeting the requirements of The Sydney Metro Harbour Tunnel Sandstone Specific Resource Recovery Order and Exemption	Waste storage As specified in each particular resource recovery exemption Capping of Ash Dam	See condition O6.2
NA	Organics	Compost, manure and mulch as defined by and meeting requirements of the Compost, Manure and Mulch Orders and Exemption, as in-force from time to time	Waste storage Capping of Ash Dam As specified in each particular resource recovery exemption	See condition O6.2

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NA	Excavated natural material	As defined by and meeting the requirements of the Excavated Natural Material Order and Exemption, as in-force from time to time	Waste storage Capping of Ash Dam As specified in each particular resource recovery exemption	See condition O6.2
NA	Virgin excavated natural material	As defined by the Protection of the Environment Operations Act, as in-force from time to time	Waste storage Capping of Ash Dam	See condition O6.2

L5.2 The following wastes generated at/on the premises may be disposed of to the ash dam or within the ash dam catchment:

- a) ash;
- b) mill pyrites, residual detergents and oil sheens, sand, concrete products, boiler blowdown, minor chemical spill residues, chemicals for environmental control, ash dam water treatment plant residues, dust returned from the ash recovery plant, marine growth, debris, seaweed, chemical cleaning solutions, oil and chemically impacted soil, silt from settling basins, dredge spoil, waste wood, wood chips, dirty water from drains, treatment plant discharges, coal handling plant stormwater, neutralised demineralisation effluent, polisher plant effluent, spent ion exchange resins, chlorine plant storage vessel precipitates, cable tunnel drainage water, fabric filter bags, coal chitter and soil capping materials, coal mine dewatering discharges;
- c) a spent solvent in the form of dilute ammonia of less than 5% concentration and at pH of not more than 9. Those discharges from the post combustion carbon capture facility must only occur whilst this facility is operational. The total annual volume discharged must not exceed 5 tonnes; and
- d) any other material approved in writing by the EPA.

L6 Potentially offensive odour

L6.1 No condition of this licence identifies a potentially offensive odour for the purposes of section 129 of the Protection of the Environment Operations Act 1997.

Note: Section 129 of the Protection of the Environment Operations Act 1997, provides that the licensee must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.

L7 Other limit conditions

L7.1 The licensee must not discharge from point 25 unless rainfall measured at point 16 or point 35 is greater than 400mm over the 31 day period immediately prior to the discharge.

Exemption when complying with directions under National Electricity Rules

L7.2 Air impurity exceedances due to compliance with an AEMO direction in accordance with section 74 of the Protection of the Environment Operations (Clean Air) Regulation 2022 do not count towards the accumulated hours for the purpose of calculating compliance with condition L3.5.

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4 Operating Conditions

O1 Activities must be carried out in a competent manner

O1.1 Licensed activities must be carried out in a competent manner.

This includes:

- a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
- b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

Note: Page Break.

O2 Maintenance of plant and equipment

O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:

- a) must be maintained in a proper and efficient condition; and
- b) must be operated in a proper and efficient manner.

O3 Dust

O3.1 The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.

O3.2 All operations and activities occurring at the premises must be carried out in a manner that will minimise the emission of dust from the premises.

O3.3 Trucks entering and leaving the premises that are carrying loads of dust generating material must be covered at all times, except during loading and unloading.

O4 Effluent application to land

O4.1 Spray from effluent application must not drift beyond the boundary of the premises.

O4.2 Effluent application must not occur in a manner that causes surface runoff.

O4.3 Irrigation of treated effluent and wastewater must not be carried out if soil moisture conditions are such that surface runoff or ponding is likely to occur.

O4.4 Public access to any effluent utilisation area must be denied during effluent application and until the effluent application area has dried.

O5 Emergency response

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Note: The licensee must maintain, and implement as necessary, a current Pollution Incident Response Management Plan (PIRMP) for the premises in accordance with Part 5.7A of the Protection of the Environment Operations Act 1997 and Chapter 4 of the Protection of the Environment Operations (General) Regulation 2022.

O6 Waste management

- O6.1 The licensee must ensure that any liquid and non liquid waste generated and/or stored at the premises that is to be sent offsite:
- a) is assessed and classified in accordance with the EPA's Waste Classification Guidelines as in force from time to time prior to leaving the premises; or
 - b) where the waste is covered by an in-force Resource Recovery Order and Exemption, the waste must meet the conditions of the relevant Order prior to leaving the premises.

- O6.2 The licensee, when capping and remediating the Vales Point Power Station ash dam, must only use those wastes permitted by condition L5.1 of this licence to be received and used at the premises to the minimum extent possible.

Note: For the purposes of condition O6.2 and determining compliance with the term "minimum extent possible", the EPA will consider such matters as any instrument approving or otherwise authorising the capping and remediation activities and any relevant design specifications for the capping and remediation activities.

O7 Other operating conditions

Permitted fuels for start-up, combustion support and emergency firing of generator

- O7.1 Distillate may be used for start-up and combustion support in Boilers 5 and 6.
- O7.2 Distillate may be used for firing the emergency diesel generator(s) at the premises for the purposes of:
- a) providing black-start capability for the Vales Point Power Station or at the direction of the AEMO; and/or
 - b) operating the emergency diesel generator(s) up to a maximum of 200 hours per reporting period.
- O7.3 Distillate fuel used in the Vales Point Power Station for start-up and combustion support and the firing of the emergency diesel generator(s) must comply with the Determination of Fuel Quality Standards (Automotive Diesel) 2019, made under section 21 of the Fuel Quality Standards Act 2000.

Other fuels permitted for use

- O7.4 Biomass in the form of sawmill residue and recycled wood blended with coal may be used at the premises in accordance with conditions E3.1 to E3.6 of this licence.
- O7.5 Methane sourced from the Newvale Colliery may be co-fired in Boiler 6.

Testing of coal fuel

- O7.6 The licensee must have in place a fuel testing program to collect and analyse a representative number of samples of coal fired in Boilers 5 and 6. At a minimum, the coal must be analysed for:
- a) ash content (%);

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- b) sulfur content (%);
- c) chlorine content (mg/kg);
- d) fluorine content (mg/kg);
- e) type 1 and 2 substances content (mg/kg); and
- f) calorific value (MJ/kg).

Cooling water

- O7.7 Chlorine may be added to the cooling water system at a rate of not more than 1200 kilograms of chlorine per day.
- O7.8 The anti-foaming agents DEAIRES 8042 or DEAIRES 7055 trading now as Defoamer PS may be added to the cooling water outlet canal and/or the onsite ash and dust pit at a rate of not more than 1680 litres per day to control the discharge of floating foam or as otherwise specified in writing by the EPA.

Onsite sewage treatment system

- O7.9 The licensee must construct, implement and operate/utilise a wastewater management system to manage the collection, storage, treatment, use and disposal of all sewage and related wastewater generated on the premises.
- O7.10 The wastewater management system(s) operated/utilised at the premises must be inspected by a suitably qualified and experienced wastewater technician at least once in each quarterly period of the reporting period and a minimum of four times per reporting period and serviced as required.
- O7.11 In relation to condition O7.10 above, the licensee must record the following:
- a) details of each inspection undertaken (date, time and personnel);
 - b) the results of any tests performed on the wastewater management system;
 - c) the finding and any actions required following each inspection; and
 - d) the date those actions were completed or the reasons they were not completed.

Chemical storage

- O7.12 The licensee must store and handle all liquid chemicals and hazardous materials used at the premises within bunded areas that are constructed and maintained in accordance with the following:
- a) any relevant Australian Standards for the liquids being stored;
 - b) within a bunded area with a minimum bund capacity of 110% of the volume of the largest single stored vessel within the bund;
 - c) the Storing and Handling Liquids: Environmental Protection Participant's Manual (DECC, 2007); and where any conflict exists between these requirements, the most stringent requirements apply.
- O7.13 For the purpose of condition O7.12 above, any tanks or other storage vessels that are interconnected and may distribute their contents either by gravity or automated pumps must be considered a single vessel.

5 Monitoring and Recording Conditions

M1 Monitoring records



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- M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.
- M1.2 All records required to be kept by this licence must be:
- a) in a legible form, or in a form that can readily be reduced to a legible form;
 - b) kept for at least 4 years after the monitoring or event to which they relate took place; and
 - c) produced in a legible form to any authorised officer of the EPA who asks to see them.
- M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:
- a) the date(s) on which the sample was taken;
 - b) the time(s) at which the sample was collected;
 - c) the point at which the sample was taken; and
 - d) the name of the person who collected the sample.

M2 Requirement to monitor concentration of pollutants discharged

- M2.1 For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

Note: Additional air and meteorological monitoring requirements for Point 35 are contained at Condition M9.

M2.2 Air Monitoring Requirements

POINT 2,3

Pollutant	Units of measure	Frequency	Sampling Method
Cadmium	milligrams per cubic metre	Every 6 months	TM-38
Chlorine	milligrams per cubic metre	Every 6 months	TM-38
Fluorine	milligrams per cubic metre	Every 6 months	TM-38
Hydrogen chloride	milligrams per cubic metre	Every 6 months	TM-38
Mercury	milligrams per cubic metre	Every 6 months	TM-38
Nitrogen Oxides	milligrams per cubic metre	Continuous	TM-38
Solid Particles	milligrams per cubic metre	Quarterly	TM-38
Sulfur dioxide	milligrams per cubic metre	Continuous	TM-38
Sulfuric acid mist and sulfur trioxide (as SO3)	milligrams per cubic metre	Every 6 months	TM-38
Type 1 and Type 2 substances in aggregate	milligrams per cubic metre	Every 6 months	TM-38



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volatile organic compounds as n-propane equivalent	milligrams per cubic metre	Every 6 months	TM-38
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POINT 4,5,6,7,8,9,10,11

Pollutant	Units of measure	Frequency	Sampling Method
Cadmium	milligrams per cubic metre	Every 6 months	TM-14
Flow rate	cubic metres per second	Continuous	CEM-6 and US EPA Procedure 1
Mercury	milligrams per cubic metre	Every 6 months	TM-14
Moisture	percent	Continuous	Special Method 1
Oxygen (O2)	percent	Continuous	CEM-3 and US EPA Procedure 1
Solid Particles	milligrams per cubic metre	Quarterly	TM-15
Temperature	degrees Celsius	Continuous	TM-2 and US EPA Procedure 1
Type 1 and Type 2 substances in aggregate	milligrams per cubic metre	Every 6 months	TM-12, TM-13 & TM-14

POINT 4,6,8,10

Pollutant	Units of measure	Frequency	Sampling Method
Carbon dioxide	percent	Every 6 months	TM-24
Chlorine	milligrams per cubic metre	Every 6 months	TM-7
Fluorine	milligrams per cubic metre	Every 6 months	TM-9
Hydrogen chloride	milligrams per cubic metre	Every 6 months	TM-8
Sulfuric acid mist and sulfur trioxide (as SO3)	milligrams per cubic metre	Every 6 months	TM-3
volatile organic compounds as n-propane equivalent	milligrams per cubic metre	Every 6 months	TM-34

POINT 12,13,14,15

Pollutant	Units of measure	Frequency	Sampling Method
Nitrogen Oxides	milligrams per cubic metre	Continuous	CEM-2 and US EPA Procedure 1
Sulfur dioxide	milligrams per cubic metre	Continuous	CEM-2 and US EPA Procedure 1

POINT 16

Pollutant	Units of measure	Frequency	Sampling Method
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Fluorides	micrograms per cubic metre	Continuous	AM-8
Nitrogen dioxide	parts per hundred million	Continuous	AM-12
PM2.5	micrograms per cubic metre	Continuous	AM-22
Sulfur dioxide	parts per hundred million	Continuous	AM-20

POINT 17,18,19,20,21

Pollutant	Units of measure	Frequency	Sampling Method
Particulate matter	grams per square metre per month	Monthly	AM-19

POINT 35

Pollutant	Units of measure	Frequency	Sampling Method
Nitrogen dioxide	parts per hundred million	Continuous	AM-12
PM2.5	micrograms per cubic metre	Continuous	AM-22
Sulfur dioxide	parts per hundred million	Continuous	AM-20

M2.3 For the purpose of condition M2.2 above:

- a) every 6 months means: a minimum of two sampling events per reporting period, at approximately 6 monthly intervals and occurring no less than 3 months apart;
- b) quarterly means: a minimum of four sampling events per reporting period, at approximately 3 monthly intervals and occurring no less than 1 month apart; and
- c) special method 1 means: any moisture monitoring method approved in writing by the EPA. The monitoring method and data must be quality assured on an ongoing basis in accordance with US EPA Procedure 1.

M2.4 For the purpose of condition M2.2 of this licence, the requirement to install, commission and continuously monitor for flow rate, moisture, oxygen and temperature at points 4 to 11 does not take effect until 30 November 2022.

Note: The EPA may consider a proposal for an extension of the due date in the condition above if it can be adequately demonstrated that additional time is required to install and commission the required monitoring equipment. A request for an extension of the due date in the condition above must be based on 1) alignment with scheduled plant maintenance shutdowns; and 2) avoidance of significant disruption to the electricity network. An application for an extension of the due date in the condition above must be made to the EPA via eConnect or in writing by 30 September 2022.

M2.5 For ambient air monitoring of pollutants, the recording of results and their reporting in the Annual Return must include "averaging periods" as follows:

- a) fluoride averaging periods of 7 days, 30 days and 90 days;
- b) nitrogen dioxide: averaging periods of one hour and annual;
- c) PM2.5: averaging periods of 24 hour and annual; and
- d) sulfur dioxide: averaging periods of one hour, 24 hour and annual.

M2.6 Water and/ or Land Monitoring Requirements

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POINT 22

Pollutant	Units of measure	Frequency	Sampling Method
Chlorine (free residual)	milligrams per litre	Monthly during discharge	Grab sample
Copper	milligrams per litre	Monthly during discharge	Grab sample
Iron	milligrams per litre	Monthly during discharge	Grab sample
Oil and Grease	Visible	Continuous during discharge	In line instrumentation
Selenium	milligrams per litre	Monthly during discharge	Grab sample
Temperature	degrees Celsius	Continuous during discharge	In line instrumentation

POINT 23,24

Pollutant	Units of measure	Frequency	Sampling Method
Aluminium	milligrams per litre	Monthly during discharge	Grab sample
Ammonia	milligrams per litre	Monthly during discharge	Grab sample
Arsenic (III)	milligrams per litre	Monthly during discharge	Grab sample
Arsenic (V)	milligrams per litre	Monthly during discharge	Grab sample
Cadmium	milligrams per litre	Monthly during discharge	Grab sample
Chromium (trivalent)	milligrams per litre	Monthly during discharge	Grab sample
Chromium (VI) Compounds	milligrams per litre	Monthly during discharge	Grab sample
Copper	milligrams per litre	Monthly during discharge	Grab sample
Iron	milligrams per litre	Monthly during discharge	Grab sample
Lead	milligrams per litre	Monthly during discharge	Grab sample
Manganese	milligrams per litre	Monthly during discharge	Grab sample
Nickel	milligrams per litre	Monthly during discharge	Grab sample
Nitrate + nitrite (oxidised nitrogen)	milligrams per litre	Monthly during discharge	Grab sample
Nitrogen	milligrams per litre	Monthly during discharge	Grab sample
pH	pH	Monthly during discharge	Grab sample

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Phosphorus	milligrams per litre	Monthly during discharge	Grab sample
Reactive Phosphorus	milligrams per litre	Monthly during discharge	Grab sample
Selenium	milligrams per litre	Monthly during discharge	Grab sample
Total Kjeldahl Nitrogen	milligrams per litre	Monthly during discharge	Grab sample
Total suspended solids	milligrams per litre	Monthly during discharge	Grab sample
Vanadium	milligrams per litre	Monthly during discharge	Grab sample
Zinc	milligrams per litre	Monthly during discharge	Grab sample

POINT 25

Pollutant	Units of measure	Frequency	Sampling Method
Aluminium	milligrams per litre	Daily for any discharge >2 hrs	Grab sample
Ammonia	milligrams per litre	Daily for any discharge >2 hrs	Grab sample
Arsenic (III)	milligrams per litre	Daily for any discharge >2 hrs	Grab sample
Arsenic (V)	milligrams per litre	Daily for any discharge >2 hrs	Grab sample
Cadmium	milligrams per litre	Daily for any discharge >2 hrs	Grab sample
Chromium (trivalent)	milligrams per litre	Daily for any discharge >2 hrs	Grab sample
Chromium (VI) Compounds	milligrams per litre	Daily for any discharge >2 hrs	Grab sample
Copper	milligrams per litre	Daily for any discharge >2 hrs	Grab sample
Iron	milligrams per litre	Daily for any discharge >2 hrs	Grab sample
Lead	milligrams per litre	Daily for any discharge >2 hrs	Grab sample
Manganese	milligrams per litre	Daily for any discharge >2 hrs	Grab sample
Nickel	milligrams per litre	Daily for any discharge >2 hrs	Grab sample
Nitrate + nitrite (oxidised nitrogen)	milligrams per litre	Daily for any discharge >2 hrs	Grab sample
Nitrogen	milligrams per litre	Daily for any discharge >2 hrs	Grab sample
pH	pH	Daily for any discharge >2 hrs	Grab sample
Phosphorus	milligrams per litre	Daily for any discharge >2 hrs	Grab sample
Reactive Phosphorus	milligrams per litre	Daily for any discharge >2 hrs	Grab sample
Selenium	milligrams per litre	Daily for any discharge >2 hrs	Grab sample

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Total Kjeldahl Nitrogen	milligrams per litre	Daily for any discharge >2 hrs	Grab sample
Total suspended solids	milligrams per litre	Daily for any discharge >2 hrs	Grab sample
Vanadium	milligrams per litre	Daily for any discharge >2 hrs	Grab sample
Zinc	milligrams per litre	Daily for any discharge >2 hrs	Grab sample

POINT 27,28,29

Pollutant	Units of measure	Frequency	Sampling Method
Aluminium	milligrams per litre	Monthly	Representative sample
Ammonia	milligrams per litre	Monthly	Representative sample
Arsenic (III)	milligrams per litre	Monthly	Representative sample
Arsenic (V)	milligrams per litre	Monthly	Representative sample
Cadmium	milligrams per litre	Monthly	Representative sample
Chromium (trivalent)	milligrams per litre	Monthly	Representative sample
Chromium (VI) Compounds	milligrams per litre	Monthly	Representative sample
Copper	milligrams per litre	Monthly	Representative sample
Iron	milligrams per litre	Monthly	Representative sample
Lead	milligrams per litre	Monthly	Representative sample
Manganese	milligrams per litre	Monthly	Representative sample
Nickel	milligrams per litre	Monthly	Representative sample
pH	pH	Monthly	Representative sample
Selenium	milligrams per litre	Monthly	Representative sample
Total suspended solids	milligrams per litre	Monthly	Representative sample
Vanadium	milligrams per litre	Monthly	Representative sample
Zinc	milligrams per litre	Monthly	Representative sample

POINT 30,31,32,33,34

Pollutant	Units of measure	Frequency	Sampling Method
Aluminium	milligrams per litre	Quarterly	Representative sample
Ammonia	milligrams per litre	Quarterly	Representative sample
Arsenic (III)	milligrams per litre	Quarterly	Representative sample
Arsenic (V)	milligrams per litre	Quarterly	Representative sample
Cadmium	milligrams per litre	Quarterly	Representative sample
Chromium (trivalent)	milligrams per litre	Quarterly	Representative sample
Chromium (VI) Compounds	milligrams per litre	Quarterly	Representative sample
Copper	milligrams per litre	Quarterly	Representative sample
Electrical conductivity	microsiemens per centimetre	Quarterly	Representative sample
Iron	milligrams per litre	Quarterly	Representative sample
Lead	milligrams per litre	Quarterly	Representative sample
Magnesium	milligrams per litre	Quarterly	Representative sample



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Manganese	milligrams per litre	Quarterly	Representative sample
Nickel	milligrams per litre	Quarterly	Representative sample
pH	pH	Quarterly	Representative sample
Potassium	milligrams per litre	Quarterly	Representative sample
Selenium	milligrams per litre	Quarterly	Representative sample
Sodium	milligrams per litre	Quarterly	Representative sample
Standing Water Level	metres	Quarterly	In situ
Vanadium	milligrams per litre	Quarterly	Representative sample
Zinc	milligrams per litre	Quarterly	Representative sample

M2.7 The licensee must also undertake no less than two water quality surveys as specified below within Lake Macquarie during each quarter of the reporting period. The surveys must be scheduled so that there are at least two surveys in each season. For each of the points specified below, the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in column 1. The licensee must use the sampling method and sample at the frequency specified opposite in the other columns.

POINTS 27, 28 & 29

Pollutant	Frequency	Sampling Method
Dissolved Oxygen	At least two (2) surveys per three (3) month period with a minimum of four (4) weeks between each survey	Measured 0.5 metres below the surface
Temperature	At least two (2) surveys per three (3) month period with a minimum of four (4) weeks between each survey	Measured 0.5 metres below the surface
Salinity	At least two (2) surveys per three (3) month period with a minimum of four (4) weeks between each survey	Measured 0.5 metres below the surface
Water clarity	At least two(2) surveys per three (3) month period with a minimum of four (4) weeks between each survey	Using a Secchi disk

M3 Testing methods - concentration limits

- M3.1 Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with:
- a) any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or
 - b) if no such requirement is imposed by or under the Act, any methodology which a condition of this licence requires to be used for that testing; or
 - c) if no such requirement is imposed by or under the Act or by a condition of this licence, any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place.

Note: The *Protection of the Environment Operations (Clean Air) Regulation 2022* requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods



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for the Sampling and Analysis of Air Pollutants in NSW".

M3.2 Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.

M4 Testing methods - load limits

Note: Division 4 of the *Protection of the Environment Operations (General) Regulation 2022* requires that monitoring of actual loads of assessable pollutants listed in L2.2 must be carried out in accordance with the relevant load calculation protocol set out for the fee-based activity classification listed in the Administrative Conditions of this licence.

M5 Weather monitoring

M5.1 For each monitoring point specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the parameter specified in Column 1. The licensee must use the sampling method, units of measure, averaging period and sample at the frequency, specified opposite in the other columns.

POINT 16

Parameter	Units of Measure	Frequency	Averaging Period	Sampling Method
Rainfall	mm	Continuous	1 hour	AM-4
Wind speed at 10m	m/s	Continuous	15 minutes	AM-2 & AM-4
Wind direction at 10m	°	Continuous	15 minutes	AM-2 & AM-4
Sigma theta at 10m	°	Continuous	15 minutes	AM-2 & AM-4
Temperature at 2m	°C	Continuous	15 minutes	AM-4
Temperature at 10m	°C	Continuous	15 minutes	AM-4
Solar radiation	W/m²	Continuous	15 minutes	AM-4
Additional requirements				
- siting				AM-1 & AM-4
- measurement				AM-1 & AM-4

M5.2 The licensee may utilise the meteorological weather monitoring station at Chain Valley Colliery operated by Great Southern Energy Pty Ltd (Delta Coal) so long as:

- a) the meteorological weather monitoring station is nominated on The Plans as the "Chain Valley Met Station";
- b) the licensee has a written agreement with Delta Coal to obtain and utilise the data from the Chain Valley Met Station; and

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c) where the Chain Valley Met Station is out of service or otherwise unavailable, the meteorological weather monitoring station identified at point 16 must be utilised in accordance with the conditions of this licence.

M6 Recording of pollution complaints

- M6.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.
- M6.2 The record must include details of the following:
- a) the date and time of the complaint;
 - b) the method by which the complaint was made;
 - c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
 - d) the nature of the complaint;
 - e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
 - f) if no action was taken by the licensee, the reasons why no action was taken.
- M6.3 The record of a complaint must be kept for at least 4 years after the complaint was made.
- M6.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M7 Telephone complaints line

- M7.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.
- M7.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.
- M7.3 The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.
- M7.4 For the purpose of condition M7.1 of this licence, operating hours are defined as twenty four hours a day, seven days a week.

M8 Requirement to monitor volume or mass

- M8.1 For each discharge point or utilisation area specified below, the licensee must monitor:
- a) the volume of liquids discharged to water or applied to the area;
 - b) the mass of solids applied to the area;
 - c) the mass of pollutants emitted to the air;
- at the frequency and using the method and units of measure, specified below.

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POINT 22

Frequency	Unit of Measure	Sampling Method
Continuous during discharge	megalitres per day	By Calculation (volume flow rate or pump capacity multiplied by operating time)

POINT 23

Frequency	Unit of Measure	Sampling Method
Continuous during discharge	megalitres per day	Flow meter and continuous logger

POINT 24

Frequency	Unit of Measure	Sampling Method
Continuous during discharge	kilolitres per day	Weir structure and level sensor

POINT 25

Frequency	Unit of Measure	Sampling Method
Continuous during discharge	kilolitres per day	By Calculation (volume flow rate or pump capacity multiplied by operating time)

POINT 26

Frequency	Unit of Measure	Sampling Method
Continuous during discharge	kilolitres per day	Flow meter and continuous logger

M9 Other monitoring and recording conditions

Additional Air and Meteorological Monitoring Requirements - Point 35

- M9.1 In relation to the continuous monitoring of ambient air pollutants at Point 35, the licensee must maintain and calibrate the air quality monitoring station referred to in condition E11.1 in accordance with the reference test methods specified in condition M2.2 and manufacturer's specifications. Records of the calibration and maintenance must be made available to EPA upon request.
- M9.2 The Licensee must develop and implement a quality assurance/quality control (QA/QC) procedure for the data collected for the purposes of condition M2.2 from the air quality monitoring station at Point 35. Upon request of the EPA, the licensee must demonstrate that this QA/QC procedure has been implemented and that data is being collected in accordance with that procedure.
- M9.3 The siting of the air quality monitoring station referred to in condition E11.1 must be in accordance with sampling method AM-1 that is detailed in the Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales



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M9.4

For continuous ambient air monitoring of pollutants at Point 35, the recording of results and their reporting in the Annual Return must include "averaging periods" as follows:

- a) nitrogen dioxide: averaging periods of one hour and annual;
- b) PM2.5: averaging periods of 24 hour and annual; and
- c) sulfur dioxide: averaging periods of one hour, 24 hour and annual.

M9.5 For the purposes of the monitoring of meteorological parameters at point 35, the monitoring station referred to condition E11.1 must be maintained to be capable of continuously monitoring the parameters specified in condition M9.6

M9.6 For the purpose of monitoring meteorological parameters at point 35, the licensee must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1 in the table below. The licensee must use the sampling method, units of measurement, averaging period and sample at the frequency, specified opposite in the other columns. The table showing monitoring parameters and corresponding requirements can be found below:

Parameter	Units of Measure	Frequency	Averaging Period	Sampling Method
Air temperature at 2 metres	degrees Celsius	Continuous	1 hour	AM-4
Air temperature at 10 metres	degrees Celsius	Continuous	1 hour	AM-4
Wind direction at 10 metres	Degrees	Continuous	15 minute	AM-2 & AM-4
Wind speed at 10 metres	m/s (metres per second)	Continuous	15 minute	AM-2 & AM-4
Sigma theta	Degrees	Continuous	15 minute	AM-2 & AM-4
Rainfall	mm	Continuous	15 minute	AM-4
Relative humidity	%	Continuous	1 hour	AM-4

M9.7 The weather monitoring instrumentation installed and operated at the point 35 must have a stall speed or lower limit of measure for measuring wind speed less than 0.2 m/s.

M9.8 The licensee must maintain and calibrate the meteorological monitoring instrumentation at point 35 in accordance with the reference test methods specified in the table in condition M9.6 and manufacturer's specifications. Records of the calibration and maintenance must be made available to EPA upon request

M9.9 The licensee must develop and implement a quality assurance/quality control (QA/QC) procedure for the data

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collected from the meteorological monitoring station at point 35. Upon request of the EPA, the licensee must demonstrate that this QA/QC procedure has been implemented and that data is being collected in accordance with that procedure.

M10 Noise monitoring

M10.1 The licensee, following the receipt of a noise related complaint and if required by the EPA, must undertake noise monitoring as required in writing by the EPA.

6 Reporting Conditions

R1 Annual return documents

R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:

1. a Statement of Compliance,
2. a Monitoring and Complaints Summary,
3. a Statement of Compliance - Licence Conditions,
4. a Statement of Compliance - Load based Fee,
5. a Statement of Compliance - Requirement to Prepare Pollution Incident Response Management Plan,
6. a Statement of Compliance - Requirement to Publish Pollution Monitoring Data; and
7. a Statement of Compliance - Environmental Management Systems and Practices.

At the end of each reporting period, the EPA will provide to the licensee notification that the Annual Return is due.

R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

R1.3 Where this licence is transferred from the licensee to a new licensee:

- a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
- b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:

- a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or

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b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.

- R1.5 The Annual Return for the reporting period must be supplied to the EPA via eConnect *EPA* or by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').
- R1.6 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.
- R1.7 Within the Annual Return, the Statements of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:
- a) the licence holder; or
 - b) by a person approved in writing by the EPA to sign on behalf of the licence holder.
- R1.8 Where the licensee is unable to complete a part of the Annual Return by the due date because the licensee was unable to calculate the actual load of a pollutant due to circumstances beyond the licensee's control, the licensee must notify the EPA in writing as soon as practicable, and in any event not later than the due date. The notification must specify:
- a) the assessable pollutants for which the actual load could not be calculated; and
 - b) the relevant circumstances that were beyond the control of the licensee.

Annual Air Emission Monitoring Report

- R1.9 The licensee must submit with the Annual Return an Annual Air Emission Monitoring Report. The Annual Air Emission Monitoring Report must analyse and summarise emission monitoring data from the reporting period including, but not limited to:
- a) a comprehensive summary (tabulated and graphical) of all periodic and continuous monitoring data as required by condition M2.2 of this licence, including a comparison with the concentration limits specified in conditions L3.4 and L3.5 of this licence;
 - b) analysis of trends in emission performance for all pollutants monitored as required under condition M2.2 of this licence. Trend analysis must include comparison of emission performance during the reporting period with emission performance from the previous 4 years;
 - c) details of any exceedances of air emission licence limits, including for any exceedances of Nitrogen Oxides concentration limits. These details must include the ambient air quality and meteorological conditions at the time of the exceedance and details of plant operating conditions at the times the exceedances occurred;
 - d) details of plant operating conditions, including Boiler load (MW), during sampling for each Boiler;
 - e) demonstrated compliance with the CEMS Quality Assurance and Control Procedures required under conditions E6.1 of this licence;
 - f) summary of fuel usage, including:
 - i. total coal and other permitted fuels consumed in each Boiler (including start-up),
 - ii. a statement about the representativeness of fuel quality during periodic air emission sampling compared to non-sampling periods,
 - iii. total fuel consumed by each Boiler during times when periodic air emission sampling was undertaken;
 - g) detailed calculations used to determine the aggregate pollutant emissions rates for points 2 and 3.

R2 Notification of environmental harm

Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material

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harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.

R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which they became aware of the incident.

R3 Written report

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:

- a) where this licence applies to premises, an event has occurred at the premises; or
 - b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,
- and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.

R3.3 The request may require a report which includes any or all of the following information:

- a) the cause, time and duration of the event;
- b) the type, volume and concentration of every pollutant discharged as a result of the event;
- c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
- d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
- e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
- f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
- g) any other relevant matters.

R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

R4 Other reporting conditions

R4.1 The licensee must notify the EPA of any exceedances of any emission or concentration limit included as a condition of this licence in accordance with condition R2.1 no later than 5 days after becoming aware of any exceedance.

R4.2 Within 20 days of the notification made in accordance with condition R4.1 above, the licensee must provide a report to the EPA at info@epa.nsw.gov.au that includes, as a minimum, the following details:

- a) the date and time the exceedance occurred;
- b) the nature of the exceedance (i.e. the pollutants involved);

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- c) the duration of the exceedance;
- d) plant operating conditions at the time of the exceedance;
- e) the cause of the exceedance;
- f) the remedial/corrective actions taken at the time the exceedance was made known; and
- g) the actions taken and/or future actions to be taken, to prevent exceedances of a similar nature occurring in the future.

- R4.3 The licensee must notify the EPA at info@epa.nsw.gov.au undertaken to satisfy a monitoring condition of this licence at least 7 days prior to the stack testing being carried out. If the licensee must delay the test due to unforeseen circumstances beyond the licensee's control, the EPA must be notified immediately of the delay at the email address contained in this condition once the delay is identified and specify the date when the stack testing is to be undertaken.
- R4.4 Information collected as required by condition M2.7 of this licence must be supplied with the corresponding Annual Return.

7 General Conditions

G1 Copy of licence kept at the premises or plant

- G1.1 A copy of this licence must be kept at the premises to which the licence applies.
- G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.
- G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

G2 Contact number for incidents and responsible employees

- G2.1 The licensee must operate 24-hour telephone contact lines for the purpose of enabling the EPA to directly contact one or more representatives of the licensee who can:
- a) respond at all times to incidents relating to the premises; and
 - b) contact the licensee's senior employees or agents authorised at all times to:
 - i) speak on behalf of the licensee; and
 - ii) provide any information or document required under this licence.
- G2.2 The licensee is to inform the EPA in writing of the appointment of any subsequent contact persons, or changes to the person's contact details as soon as practicable and in any event within fourteen days of the appointment or change.

G3 Signage

- G3.1 Each monitoring and discharge point must be clearly marked by a sign that indicates the EPA point identification number.
- G3.2 The condition above does not apply to any background or ambient monitoring points on or within Lake

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G4 Other general conditions

G4.1 Completed Programs

Program	Description	Completed Date
Air Quality Assessment to Determine Site Specific Air Emission Limits	Air quality assessment to determine site specific emission limits. Ensure emission limits are reflective of proper and efficient operation of plant and equipment and also do not have an impact on the receiving environment.	17-September-2002
Extent of Saline Estuarine Waters	Undertake a study of Wyee Creek and diversion channel to determine extent of estuarine waters. Identify appropriate location for discharge of saline waters from premises so that freshwater systems are not impacted	30-April-2012
Reduce Impact of Discharges	Mitigation measures to reduce impact of discharge from ash dam in Wyee Creek diversion channel. Reduce impact of saline water discharge on freshwater system	30-April-2012
Ash Dam Seepage - Groundwater Investigation	Investigate groundwater quality in vicinity of Ash Dam to determine any impact and associated mitigation measures	21-October-2015
Investigation of further controls to reduce Nitrogen Oxide Emissions	The Licensee must undertake a review of international best practice measures to minimise the generation, and emission, of nitrogen oxides (NOx) from coal fired electricity generation and identify control measures and techniques that can be implemented at Vales point.	29-June-2017
Trigger, Action and Response Plan (TARP) - NOx	Develop and implement a TARP to minimise and prevent any risks associated with NOx emissions limits exceedances.	01-July-2022

8 Pollution Studies and Reduction Programs

U1 PRS 8 - Coal ash repository water sampling program and characterisation

U1.1 The licensee must prepare, and submit to the EPA, a Coal Ash Repository Water Sampling Program (Program) aimed at characterising surface and groundwater (including seepage) discharges associated with coal ash repositories (including ash dams and open cut mine voids) at the Premises.

The Program must:

- (a) be prepared by a suitably qualified and experienced person(s) in consultation with the EPA;
- (b) be informed by contemporary information and data regarding the pollutants potentially present in the coal ash water;
- (c) be consistent with the Approved methods for the sampling and analysis on water pollutants in NSW (EPA,

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2021);

(d) include a site map that clearly identifies the following:

- (i) all relevant components of the coal ash water management system (e.g. ash dam cells, decant ponds, return water ponds, seepage collection system),
- (ii) groundwater bores and piezometers,
- (iii) all discharge points and flow paths to receiving waterways, and
- (iv) all proposed sampling locations;
- (e) set out the proposed sampling program, that includes:
 - (i) sampling of (as relevant)

- controlled discharges,
- managed overflows,
- surface water storages related to coal ash management (e.g. ash dam cells, decant ponds),
- seepage water (e.g. seepage collection ponds, surface expressions),
- any groundwater bores or piezometers screened within or adjacent to the ash repositories;

(ii) the sampling conditions/frequency and the duration of the sampling program, including rationale and justification for the proposed sampling frequency and duration of the sampling program; and

(iii) the analytical suite including all pollutants present at non-trivial levels, based on any existing monitoring data and a risk assessment of the range of potential pollutants that could be present.

The Program must be provided to the EPA via email to info@epa.nsw.gov.au.

Note: On 14 February 2023, the licensee wrote to the EPA providing the draft Program. The EPA has reviewed the draft Program and written to the licensee providing comments to be included for the implementation of the Program.

U1.2 The licensee must implement the Coal Ash Repository Water Sampling Program detailed in the report titled "Coal Ash Repository Water Sampling Plan, Vales Point Power Station", prepared by Jacobs Group (Australia) Pty Limited, dated 1 February 2023 (EPA ref. DOC23/171693) and incorporate the comments and recommendations in the EPA's letter dated xx March 2023 (EPA ref. DOC23/171693-3).

U1.3 By 30 September 2024, the licensee must prepare, and provide to the EPA, a Coal Ash Repository Water Characterisation Report (Water Characterisation Report) that details the findings of the Coal Ash Repository Water Sampling Program required under PRS 8. The Water Characterisation Report must:

- (i) be prepared by a suitably qualified and experienced person/s in consultation with the EPA;
- (ii) include all sampling results and summary statistics;
- (iii) including, as a separate electronic attachment, an Excel spreadsheet file of all results. This file must provide results in long format, with sampling dates as row labels and analytes as column labels;
- (iv) screen sampling results for pollutants of concern with reference to relevant guidelines including the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG, 2018). (Where no ANZG [2018] guideline value exists, relevant benchmark values from other sources, including other guidelines, scientific literature and grey literature, should be used);
- (v) identify all potential pollutants of concern in the ash water.

The Water Characterisation Report must be provided to the EPA by email to info@epa.nsw.gov.au.

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9 Special Conditions

E1 Discharge of cooling waters into Lake Macquarie

E1.1 In the event that:

- a) the AEMO, or a person authorised by the AEMO, directs the licensee, under the National Electricity Rules, to maintain, increase or be available to increase power generation, for system security, the licensee may exceed the maximum operating hours above 35°C and the maximum temperature specified in conditions L3.8 and L3.9 of this licence; or
- b) the EPA may, by notice in writing, in response to circumstances that the EPA considers may impact on the function of the NSW electricity supply, grant the licensee an approval to exceed the cooling water temperature limits specified in conditions L3.8 and L3.9 of this licence,

then any such direction by the AEMO or approval by the EPA remains in place for the period specified in the direction or approval or if no period is specified, for 72 hours from the date and time of the direction or approval.

- E1.2 If the licensee receives a direction from the AEMO as detailed under condition E1.1a) above, the licensee must immediately notify the EPA in writing of the time and date the direction was given and the period of time that the limits specified in conditions L3.8 and L3.9 of this licence were exceeded.
- E1.3 An approval issued under condition E1.1b) of this licence does not count towards hours accumulated above cooling temperature parameters under this licence.
- E1.4 When a direction issued under condition E1.1a) of this licence is revoked by the AEMO or ceases to have effect or an approval issued under condition E1.1b) of this licence is revoked by the EPA or ceases to have effect, the licensee must, as soon as practicable, decrease the cooling water discharge temperature to within the limits specified in conditions L3.8 and L3.9 of this licence.

E2 Seagrass monitoring program

- E2.1 The licensee must implement and maintain on an annual basis a Seagrass Monitoring Program approved in writing by the EPA.
- E2.2 Every year, the licensee must submit, with the Annual Return, a Seagrass Monitoring Program Report that includes, but is not necessarily limited to:
 - a) provision of the data, analysis and conclusions of the Seagrass Monitoring Program required under condition E2.1 above; and
 - b) comparison and discussion of data collected since the commencement of the Seagrass Monitoring Program in the summer of 2016-2017 and any other relevant and/or previous studies.
- E2.3 If the Seagrass Monitoring Program required by conditions E2.1 and E2.2 of this licence identifies observed changes that indicates a reduction in seagrass areas and/or species composition and where these changes are likely to be attributed to the licensed activities, the licensee must prepare a report that details the following:
 - a) a description of ameliorative measures, including the timeframe for implementation of management actions; and
 - b) in the case where impacts are unavoidable, a description of how the impacts will be offset, with the report submitted to the EPA at info@epa.nsw.gov.au within three months of obtaining the Seagrass

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Monitoring Program Report required under condition E2.2 above.

E3 Solid alternative fuel

- E3.1 For the purpose of this licence, solid alternative fuel means timber products that are:
- compliant with regulation 8 (special requirements – wood wastes) of division 2.2 (eligible renewable energy sources) in part 2 of the Renewable Energy (Electricity) Regulations 2001 and Renewable Energy (Electricity) Act 2000; and
 - biomass that is sustainably harvested as defined in the Greenhouse Gas Emissions from Electricity Supplied in NSW, Emissions Workbook, October 2000. Ministry of Energy and Utilities.
- E3.2 Solid alternative fuel must only be co-fired with coal and at a rate not exceeding five (5) percent by weight of the coal feed rate.
- E3.3 The concentration of Type 1 & 2 substances (as defined in the Protection of the Environment Operations (Clean Air) Regulation 2010) in any solid alternative fuel co-fired in the power station must not exceed 350 milligrams per kilogram.
- E3.4 The licensee must have a statistically valid sampling and quality control program for all solid alternative fuel co-fired in the power station. The quality control program must include the determination of the solid alternative fuel's calorific value (MJ/kg), the concentration of Type 1 & 2 substances (as defined in the Protection of the Environment Operations (Clean Air) Regulation 2010) and the concentration of chlorine, copper, fluorine and sulfur. The concentration of the substances referred to above must be reported as milligrams per kilogram of solid alternative fuel.
- E3.5 The licensee is prohibited from intentionally burning solid alternative fuel contaminated with paint, chemicals, timber preservatives and treatments or hazardous substances.

E4 Site specific air emission monitoring plan

- E4.1 The licensee must develop and submit a Site Specific Air Emission Monitoring Plan to the EPA which supports the comprehensive management of air emission monitoring required by this licence. As a minimum, the Site Specific Air Emission Monitoring Plan must describe in detail the following:
- monitoring and discharge points;
 - detailed description of the operational measures used for ensuring the representativeness of emission measurements during monitoring including any procedures relating to pre-test planning, setting operating conditions and process data collection and recording;
 - detailed description of sampling methodology and test procedures;
 - description of any deviation from the relevant test methods, including analysis of the likely effect of any deviation on the final sampling and test results;
 - detailed description of quality assurance and quality control procedures used for collecting, verifying and reporting emission test data;
 - responsible personnel and roles;
 - governance/version control, review and updating procedures for the plan; and
 - a detailed methodology and all supporting calculations used to determine the aggregated emission concentration for each pollutant associated with points 2 and 3 as stipulated by conditions L3.4 and L3.5. All calculations must, at a minimum, meet the requirements of TM-38.

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- E4.2 The Site Specific Air Emission Monitoring Plan required by condition E4.1 above must be drafted and provided to the EPA at info@epa.nsw.gov.au for review and approval by 5pm on 31 January 2021.

Note: On 29 January 2021, the licensee wrote to the EPA providing the Site Specific Air Emissions Monitoring Plan. On 31 August 2021, the EPA wrote to the licensee providing comments on the Plan. On 19 January 2022, the licensee wrote to the EPA providing a revised Plan. The revised Plan is being reviewed by the EPA.

E5 Continuous emission monitoring systems - quality assurance and control procedures

- E5.1 The licensee must develop and submit a CEMS quality assurance (QA) and quality control (QC) procedure to the EPA which enables the evaluation of the quality of data produced by any CEMS monitoring required by conditions of this licence. As a minimum, the CEMS QA/QC procedure must describe in detail the following:
- a) calibration and adjustment measures;
 - b) preventive maintenance measures (including spare parts inventory);
 - c) data handling, recording and calculation procedures;
 - d) processes for evaluating, verifying and reporting monitoring data;
 - e) accuracy audit measures including sampling and analysis methods;
 - f) fault identification and corrective action measures; and
 - g) process for ongoing review and evaluation of the effectiveness of the CEMS QA/QC procedures.

- E5.2 The CEMS QA/QC Procedure required by condition E5.1 above must be drafted and provided to the EPA at info@epa.nsw.gov.au for review and approval by 5pm on 31 March 2021.

Note: On 26 March 2021, the licensee wrote to the EPA providing the CEMS QA/QC Procedure. On 7 February 2022, the EPA wrote to the licensee providing comments on the CEMS QA/QC Procedure. On 7 March 2023, the licensee wrote to the EPA providing a revised CEMS QA/QC Procedure. The EPA is reviewing this document.

E6 Air pollution control equipment - maintenance, operation and fault response procedure

- E6.1 The licensee must develop and submit an air pollution control equipment - maintenance, operation and fault response procedure to the EPA which ensures that air pollution control equipment is maintained and operated in accordance with conditions O1.1 and O2.1 of this licence. As a minimum, the procedure must describe in detail the following:
- a) procedures for routine operations including equipment start-up and shut-down;
 - b) procedures for routine and non-routine inspections and maintenance;
 - c) procedures for faults and failure response and emergency situations;
 - d) spare parts inventory;
 - e) reporting and training procedures;
 - f) verification procedures incorporating performance indicators and benchmarks relating to:
 - i. performance monitoring,
 - ii. operational efficiency, and
 - iii. data quality,
 - g) planning, reporting, record keeping and tracking systems; and

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h) process for ongoing review and evaluating air pollution control equipment - maintenance, operation and fault response procedure.

E6.2 The air pollution control equipment - maintenance, operation and fault response procedure must be peer reviewed and endorsed by a suitably qualified air pollution control practitioner, affirming the suitability of the procedure for meeting its objectives.

E6.3 The air pollution control equipment - maintenance, operation and fault response procedure required by condition E6.1 of this licence must be drafted and provided to the EPA at info@epa.nsw.gov.au for review and approval by 5pm on 31 January 2021.

Note: On 29 January 2021, the licensee wrote to the EPA providing the Air Pollution Control Equipment - Maintenance, Operation and Fault Response Procedure. On 18 October 2021, the EPA wrote to the licensee providing comments on the Procedure.

On 3 November 2022, the licensee wrote to the EPA providing a revised Air Pollution Control Equipment - Maintenance, Operation and Fault Response Procedure. On 20 February 2023, the EPA wrote to the licensee providing comments on the revised Procedure.

E7 Continuous particle matter monitoring installation report

E7.1 The licensee must prepare a Particle Matter-Continuous Emission Monitoring System (PM-CEMS) installation report that must:

- a) include proposed actions for the implementation of PM-CEMS;
- b) identify the proposed locations for monitor installations;
- c) include proposed timing for the installation of PM-CEMS;
- d) include a proposed installation and commissioning plan for the PM-CEMS; and
- e) detail procedures for evaluating the performance of the PM-CEMS following installation.

E7.2 The continuous particle matter monitoring installation report required by conditions E7.1 above must be provided to the EPA at info@epa.nsw.gov.au by 5pm on 31 March 2021.

Note: On 31 March 2021, the licensee wrote to the EPA providing the Continuous Particle Matter Monitoring Installation Report, fulfilling the requirements of this section.

On 22 March 2022, the licensee wrote to the EPA providing an update regarding progress with the staged replacement of particle monitors at the premises. The EPA understands that preliminary correlation testing results indicated attempts to correlate the PM-CEMS in accordance with PS-11 were unsuccessful. Despite the unsuccessful attempt, the licensee intends proceeding with the installation of the remaining seven PM-CEMS.

On 6 April 2022, the EPA wrote to the licensee requesting that, prior to commissioning the remaining seven PM-CEMS, the licensee provide:

- (i) A copy of the PM-CEMS Trial Report for the Unit installed in respect of Point 4, for review and comment; and
- (ii) Details of the proposed commissioning and correlation of the remaining seven PM-CEMS units.

On 10 November 2022, the licensee wrote to the EPA providing an update regarding the trial of PM-CEMS units. On 9 January 2023, the EPA wrote to the licensee recommending the development of a test plan to support the proposed PM-CEMS trial. It is the EPA intention to vary the licence in due course to formalise the undertaking of a PM-CEMS trial at the premises.

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E8 Dust suppressant toxicity assessment

- E8.1 The licensee must undertake and report on ecotoxicological testing of any dust suppressants used at/on the Vales Point Power Station Ash Dam (and any other localities at the premises) in accordance with the following:
- a) be undertaken by a suitably qualified practitioner;
 - b) identify all dust suppressant products used at the premises and provide details of their chemical composition, application methods and application rates;
 - c) provide the dust suppressant product specifications and safety data sheets;
 - d) assess the toxicity of the dust suppressant products on aquatic biota with reference to ecotoxicology testing of at least 5 locally relevant test species covering at least 4 taxonomic groups (suitable existing data may be used where available);
 - e) assess the potential impacts of discharges of residual dust suppressants on the environmental values of the receiving waters consistent with the national Water Quality Guidelines (ANZG, 2018) based on monitoring of concentrations of residual dust suppressant chemicals in discharges and receiving waters; and
 - f) where relevant based on the findings above, recommend practical and reasonable measures to mitigate identified impacts.
- E8.2 The licensee must provide a methodology to address condition E8.1 above to the EPA at info@epa.nsw.gov.au for consideration and approval within 2 months of commencing use of any dust suppressants.
- E8.3 The licensee must provide a dust suppressant toxicity assessment report as required by conditions E8.1 to E8.2 of this licence to the EPA at info@epa.nsw.gov.au within 12 months of commencing use of any dust suppressants.

Note: On October 2022, the licensee wrote to the EPA providing an toxicity assessment in respect of SuppressX dust suppressant. On 9 January 2023, the EPA wrote to the licensee providing comments on the toxicity assessment and identifying issues to be addressed.

E9 Groundwater assessment (south-east portion of ash dam)

- E9.1 Ongoing VPPSAD South-East Groundwater Monitoring Program
- a) The licensee must implement the recommendations of the "Report on Groundwater Assessment in the Vicinity of Lot 421 in DP578194, Doyalson North", prepared by Douglas Partners, dated 22/12/2021 (EPA reference DOC22/1889), by undertaking groundwater monitoring every six months to assess the effectiveness of measures implemented to mitigate potential groundwater movement from the south-east portion of the Vales Point Power Station Ash Dam (Ongoing VPPSAD South-East Groundwater Monitoring Program).
 - b) By 30 September 2023, and by 30 September every year thereafter, the licensee must submit a report detailing and discussing the findings of the Ongoing VPPSAD South-East Groundwater Monitoring Program. The report must detail actions recommended to address any identified issues or adverse trends. The report must be provided to the EPA by email to info@epa.nsw.gov.au.

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E10 PFAS monitoring program

E10.1 The licensee must undertake a bi-annual PFAS monitoring program at the premises to assess the stability and long-term trends of the PFAS plume and identify any changes in the risk profile (PFAS Monitoring Program). The PFAS Monitoring Program must include, but is not limited to, the following.

(a) Six-monthly groundwater monitoring at, and in the vicinity of the operational areas; and six-monthly surface water and sediment monitoring along the cooling water canals, between 1 July 2022 and 30 June 2024.

(b) Monitoring is to be undertaken at the reference locations in the table below (based on 'PFAS Monitoring - Vales Point Power Station Round 4', prepared by Jacobs, dated 17 December 2021; and, the 'Consolidated PFAS Report', prepared by Jacobs, dated 30 April 2018).

(c) Monitoring must be undertaken for:

- (i) PFAS full suite (28 analytes);
- (ii) Supporting parameters such as groundwater levels, groundwater contours; and
- (iii) Water quality parameters such as conductivity, redox, pH, dissolved oxygen and temperature.

(d) The laboratory undertaking the analyses must be NATA accredited for the analysis required above (except for the supporting parameters in (c)(ii) above, and temperature).

Monitoring Point	Operation Area	Assessment Required
VU_MW15, MW-D10	North of Vales Point Power Station	Assessment of source-receptor pathway and potential groundwater flows from the Station towards residential areas of Mannering Park
VU-MW02	East of operation area adjoining Lake Macquarie	Assessment of source-receptor pathway and potential groundwater flows from the Station towards Lake Macquarie
VM-MW03, VS_MW01, VS_MW02, VM_MW01	Chlorine Plant	Assessment of source-receptor pathway and potential groundwater flows from the Station towards cooling canal
VB-MW01, VB_MW02, VB_MW05	A-Station	Assessment extent of PFAS contamination in groundwater
VA_MW1, VA_MW02, VA_MW05, VA_MW06	B-Station	Assessment extent of PFAS contamination in groundwater
VC_MW01, VC_MW02, VC_MW05	Transformer Area	Assessment of source-receptor pathway and potential groundwater flows from the Station towards cooling canal

E10.2 The licensee must prepare, and submit to the EPA, an annual report detailing the PFAS Monitoring Program required above (PFAS Monitoring Program Report). The PFAS Monitoring Program Report must include, but is not limited to, the following.

- (a) All monitoring data and program findings to date;
- (b) A discussion regarding any further delineation or data gaps;
- (c) A discussion regarding the adequacy of the monitoring procedures;
- (d) Comparison against relevant assessment criteria;

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- (e) Comparison to previous sampling results (including data from 2014 onwards);
- (f) Details on the extent of the PFAS monitored by the PFAS Monitoring Program through text, tables and figures;
- (g) An assessment of human health and ecological risks posed by any contamination;
- (h) Relevant hydrogeological parameters (i.e. groundwater levels, flow direction, gradient, seepage velocity, estimated plume boundaries); and
- (i) A description of trigger points that warrant additional monitoring or investigation works (e.g. monitoring data suggests PFAS is migrating offsite to the cooling water canal or offsite from operational areas; a sharp increase in PFAS concentrations or increasing trend in PFAS concentrations).

The PFAS Monitoring Program Report must be provided to the EPA by email to info@epa.nsw.gov.au each year by 30 June 2023 (i.e. for monitoring undertaken in the 2022-2023 period), and 30 June 2024 (i.e. for monitoring undertaken in the 2023-2024 period).

E10.3 The licensee must notify the EPA as soon as practicable upon identifying any significant risks due to PFAS during the PFAS Monitoring Program.

E11 Additional Meteorological and Air Quality Monitoring Station

E11.1 The licensee is required to install and operate an additional Meteorological and Air Quality Monitoring Station in the vicinity of Wyee Point that:

- a) is representative of the sensitive receivers in the area to the satisfaction of the EPA;
- b) continuously measures concentrations of SO₂, NO, NO₂ and PM_{2.5} in accordance with condition M2.1
- c) continuously monitors meteorological conditions in accordance with condition M9.6;
- d) monitors air quality in accordance with the Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales (DEC 2007).

E11.2 The air quality monitoring station required by condition E11.1 must be installed and operational to the satisfaction of the EPA on or before 31 December 2022.

Note: On 22 December 2022, the licensee contacted the EPA advising the installation and commenced operation of the required additional meteorological and air quality monitoring station. The EPA intends removing this Special Condition from the Licence when an updated plan of the premises is provided that marks and shows the location of the new station.

Note: The Meteorological and Air Quality monitoring station required by conditions E11.1 and E11.2 will be identified as Point 35 once the station is installed and operational to the satisfaction of the EPA.

E12 Nitrogen Oxides Emission Control Engineering Feasibility Study

E12.1 The licensee is required to undertake a detailed feasibility evaluation study for emission control measures for Nitrogen Oxides that are not currently used at the Premises, including:

- a) Low NO_x burners;
- b) Selective non-catalytic reduction (SNCR);

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- c) Selective catalytic reduction (SCR);
- d) Neural network technology (continuous combustion optimisation software).

For the purposes of condition E12.1, 'feasibility' is taken to mean what is technically possible to have implemented at the Premises from an engineering perspective

E12.2 The licensee must, based on the evaluation in condition E12.1, identify practical measures that could be implemented to reduce Nitrogen Oxides emissions at the premises. Practicability may have regard to factors including, but not limited to:

- a) Air quality impacts
- b) Expected plant life and implementation timeframe
- c) Plant efficiency
- d) Cost
- e) Technical and engineering constraints

E12.3 The feasibility evaluation study required by special condition E12.1 and E12.2 must be submitted to the EPA for review by 31 December 2022.

Note: On 23 December 2022, the licensee wrote to the EPA providing the Nitrogen Oxides Emissions Control Engineering Feasibility Study. The EPA is reviewing this report.

E13 Sulfur Oxides Emissions Reduction Study

E13.1 The licensee must prepare a Sulfur Oxides (SOx) emissions reduction report to address the following items:

1) Provide a detailed feasibility evaluation of SOx emission control measures that are not currently used at the premises,

(a) the feasibility study must include, but not be limited to, the following measures:

- (i) Dry flue gas desulfurisation
- (ii) Wet scrubbing
- (iii) Semi-dry scrubbers
- (iv) Sorbent injection

(b) Based on that evaluation under condition E13.1(1), identify feasible measures that could be implemented to reduce SOx emissions at the Premises. For the purpose of this requirement, feasibility is taken to be what is technically possible to be implemented at the Premises from an engineering perspective.

2) Undertake Continuous Emissions Monitoring System CEMS data analysis to investigate, identify and propose SOx emissions limits reflective of:

- (a) The proper and efficient operation of the plant;
- (b) Previous and expected plant performance.

3) The licensee must engage a suitably qualified and independent consultant to prepare an Air Quality Impact Assessment (AQIA):

(a) The AQIA must be undertaken in accordance with the Approved Methods for the Modelling and

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Assessment of Air Pollutants in NSW;

- (b) The AQIA must include as a minimum modelling scenarios representative of the SO_x concentrations limits proposed under condition E12.1(2) being emitted every hour of the modelling period;
- (c) The AQIA must present the incremental (power station only) ground level concentrations for SO₂;
- (d) The AQIA must present cumulative impacts for SO₂ accounting for:
 - (i) other significant existing emission sources (including other existing power stations);
 - (ii) any currently approved developments which would be significant emission sources, and
 - (iii) background air quality.
- (e) Any assumptions made during the preparation of the AQIA must be accompanied by a detailed description, supporting evidence and must be robustly justified.

4) Based on the results and conclusions in the AQIA conducted under condition E13.1(3), nominate practical measures that can be implemented to mitigate air pollution impacts from the Premises. Practicability may have regard for factors including, but not limited to:

- (a) Air quality impacts;
- (b) Expected plant life and implementation timeframe;
- (c) Plant efficiency;
- (d) Cost;
- (e) Technical and engineering constraints.

5) The AQIA under condition E13.1(3) should be informed by results and conclusions of the following documents:

- Katestone Environmental Pty Ltd, Vales Point Power Station Air Quality Assessment for Group Exemption Extension (8 October 2021);
- Jacobs Group (Australia) Pty Ltd, Memorandum, Sulfur Oxide (SO_x) emissions and reduction options for Vales Point Power Station (30 September 2021);
- Katestone Environmental Pty Ltd, Revised NO_x Emission Limits for Vales Point Power Station (26 November 2021).

6) The SO_x emission reduction study report required by E13.1 must be submitted to the EPA for review by 31 December 2022.

Note: On 23 December 2022, the licensee wrote to the EPA providing the Sulfur Oxides Emissions Reduction Study. The EPA is reviewing this report.



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Dictionary

General Dictionary

3DGM [in relation to a concentration limit]	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
AM	Together with a number, means an ambient air monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
BOD	Means biochemical oxygen demand
CEM	Together with a number, means a continuous emission monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 2009.
general solid waste (non-putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

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flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
general solid waste (putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder described at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
restricted solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
special waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TM	Together with a number, means a test method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .



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TSP	Means total suspended particles
TSS	Means total suspended solids
Type 1 substance	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
Type 2 substance	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste type	Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non-putrescible), special waste or hazardous waste
Wellhead	Has the same meaning as in Schedule 1 to the Protection of the Environment Operations (General) Regulation 2021.

Mr Grahame Clarke

Environment Protection Authority

(By Delegation)

Date of this edition: 14-June-2000

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End Notes

- 1 Licence varied by notice V/M upgrade, issued on 08-Jul-2000, which came into effect on 08-Jul-2000.
- 2 Licence varied by notice 1001143, issued on 22-Sep-2000, which came into effect on 17-Oct-2000.
- 3 Licence varied by notice 1015942, issued on 24-May-2002, which came into effect on 18-Jun-2002.
- 4 Licence varied by notice 1019491, issued on 19-Dec-2003, which came into effect on 13-Jan-2004.
- 5 Licence varied by notice 1039721, issued on 12-Aug-2004, which came into effect on 06-Sep-2004.
- 6 Licence varied by notice 1053558, issued on 05-Dec-2005, which came into effect on 30-Dec-2005.
- 7 Licence varied by notice 1065959, issued on 01-Nov-2006, which came into effect on 01-Nov-2006.
- 8 Licence varied by notice 1068259, issued on 01-Nov-2007, which came into effect on 01-Nov-2007.
- 9 Condition A1.3 Not applicable varied by notice issued on <issue date> which came into effect on <effective date>
- 10 Licence varied by notice 1096237, issued on 24-Dec-2008, which came into effect on 24-Dec-2008.
- 11 Licence varied by notice 1099216, issued on 07-May-2009, which came into effect on 07-May-2009.
- 12 Licence varied by notice 1105162, issued on 19-Aug-2009, which came into effect on 19-Aug-2009.
- 13 Licence varied by notice 1109542, issued on 01-Dec-2009, which came into effect on 01-Dec-2009.
- 14 Licence varied by notice 1117452, issued on 22-Nov-2010, which came into effect on 22-Nov-2010.
- 15 Licence varied by notice 1128999, issued on 16-Jun-2011, which came into effect on 16-Jun-2011.
- 16 Licence varied by notice 1502146 issued on 02-Nov-2011
- 17 Licence format updated on 03-Nov-2011
- 18 Licence fee period changed by notice 1502852 on 01-Jan-2012
- 19 Licence varied by notice 1503238 issued on 04-Jan-2012
- 20 Licence varied by notice 1504645 issued on 01-May-2012



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21	Licence varied by notice	1506558 issued on 14-Nov-2012
22	Licence varied by notice	1513810 issued on 13-Nov-2013
23	Licence varied by notice	1518777 issued on 04-Mar-2014
24	Licence varied by notice	1521871 issued on 05-Sep-2014
25	Licence varied by notice	1535348 issued on 14-Dec-2015
26	Licence transferred through application 1536547 approved on 17-Dec-2015 , which came into effect on 18-Dec-2015	
27	Licence varied by notice	1541050 issued on 18-Aug-2016
28	Licence varied by notice	1545995 issued on 14-Nov-2016
29	Licence varied by notice	1549284 issued on 10-Feb-2017
30	Licence varied by notice	1551199 issued on 31-May-2017
31	Licence varied by notice	1553516 issued on 27-Sep-2017
32	Licence varied by notice	1578786 issued on 21-May-2019
33	Licence varied by notice	1587222 issued on 23-Jul-2020
34	Licence varied by notice	1613778 issued on 27-Oct-2021
35	Licence varied by notice	1614881 issued on 15-Dec-2021
36	Licence varied by notice	1619037 issued on 23-May-2022
37	Licence varied by notice	1619359 issued on 10-Jun-2022
38	Licence varied by notice	1621682 issued on 26-Aug-2022
39	Licence varied by notice	1623946 issued on 28-Oct-2022
40	Licence varied by notice	1624168 issued on 01-Nov-2022
41	Licence varied by notice	1625329 issued on 16-Dec-2022
42	Licence varied by notice	1626577 issued on 03-Apr-2023